

CLAIMS

1. A vehicle independent suspension system having means for supporting a pair of wheels on a vehicle body, each wheel support including:

an upper control arm,

a lower control arm associated with the upper control arm and located beneath the upper control arm,

said control arms co-operating to mount a wheel carrier on a vehicle body,

the upper control arm having an inner end and an outer end,

said inner end of the upper control arm being connected by an articulating joint to the vehicle body,

said outer end of the upper control arm being connected by an articulating joint to the wheel carrier,

the lower control arm having an inner end and an outer end,

said inner end of the lower control arm being connected by an articulating joint to the vehicle body,

said outer end of the lower control arm being connected by an articulating joint to the wheel carrier,

a compression spring,

said compression spring having an upper end and a lower end,

articulating joint to the vehicle body,

said lower end of the compression spring being connected by an articulating joint to one of the upper control arm and the lower control arm,

said articulating joint having a centre of rotation below a line joining centres of rotation of the articulating joints at the inner end and at the outer end of said control arm.

2. An independent suspension system as claimed in claim 1 wherein a lower end of the compression spring is connected to the lower control arm.
3. An independent suspension system as claimed in claim 1 wherein the lower end of the compression spring is connected to the upper control arm.
4. An independent suspension system as claimed in claim 1 wherein when the suspension system is in a normal rest position the compression spring is supported in an upright orientation between the articulating joints connecting the compression spring to the vehicle body and the control arm.
5. An independent suspension system as claimed in claim 1 wherein the compression spring is assisted by one or more additional springs.
6. An independent suspension system as claimed in claim 1 wherein the compression spring comprises one or more coil springs.
7. An independent suspension system as claimed in claim 1 wherein the compression spring comprises a hydro-pneumatic spring.
8. An independent suspension system as claimed in claim 1 wherein an additional compression spring is mounted between the vehicle body and a control arm.

9. An independent suspension system as claimed in claim 8 wherein the additional spring is provided by a bump stop which is engagable with the control arm as the suspension travels in the direction of compressing the suspension spring.

5

prelim3\ps0041US

10

15

20

25

30

35

10071079-001100